

Date: Fri, 19 Aug 94 04:30:21 PDT
From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>
Errors-To: Ham-Digital-Errors@UCSD.Edu
Reply-To: Ham-Digital@UCSD.Edu
Precedence: Bulk
Subject: Ham-Digital Digest V94 #277
To: Ham-Digital

Ham-Digital Digest Fri, 19 Aug 94 Volume 94 : Issue 277

Today's Topics:

(none)

??can u use internet to 2 mtr. packet? (2 msgs)
A message from micah
Baypac and HTX-202
Internet Connections Via Packet
Is there a FAQ
JVFAX Interfaces?
Kantronics KPC-3 or MFJ 1270C?
Need 9600 baud mod info for IC271/471
New satellite Windows programs
Upgrading TNC
Widrow-Hoff LMS algorithm for DSP???
X1J Gurus?

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>

Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 19 Aug 94 19:19:01 GMT
From: news-mail-gateway@ucsd.edu
Subject: (none)
To: ham-digital@ucsd.edu

Date: Tue, 16 Aug 1994 22:15:54 GMT

From: ihnp4.ucsd.edu!newshub.sdsu.edu!nic-nac.CSU.net!usc!howland.reston.ans.net!
europa.eng.gtefsd.com!library.ucla.edu!news.ucdavis.edu!chip.ucdavis.edu!
szhall@network.ucsd.edu
Subject: ??can u use internet to 2 mtr. packet?
To: ham-digital@ucsd.edu

Can a person send a message from internet to 2 meter packet radio..I
sure this been asked before. Also can you send a 2 meter packet msg. to
internet?..Jeff

Date: Wed, 17 Aug 1994 10:11:03 GMT
From: ihnp4.ucsd.edu!ucsnews!newshub.sdsu.edu!nic-nac.CSU.net!
charnel.ecst.csuchico.edu!csusac!csus.edu!netcom.com!ka4byp@network.ucsd.edu
Subject: ??can u use internet to 2 mtr. packet?
To: ham-digital@ucsd.edu

szhall@chip.ucdavis.edu wrote:
: Can a person send a message from internet to 2 meter packet radio..I
: sure this been asked before. Also can you send a 2 meter packet msg. to
: internet?..Jeff

Its done all the time, but there's no guarantee that the message will get
thru unless the gateway station is *well* connected and maintained. And
that appropriate routing and paths are available to and from stations
(BBS's) beyond the gateway machine. 73/bob ka4byp

--

Bob Merritt KA4BYP -----> ka4byp@netcom.com <-----

Date: 17 Aug 1994 23:13:39 -0700
From: solano.community.net!odin.community.net!not-for-mail@uunet.uu.net
Subject: A message from micah
To: ham-digital@ucsd.edu

When I origanaly posted my first message on this news groupe I
diddn't anticipate such an onslought of replies, I was not flamed (thank
goodness) but I did receive quite a few non the less.

Most of them were supportive of my actions but cutioned me on how
big of messages to send throught the net. The rest were unsupportive to
say the least.

I feal that I stirred up a small controversy in this news groupe.

I ownly do my packetting in the wee hours in the morning (from 00 - 0500pac), due to the high packet use through out the day in my area, any thing below 25watts has no chance at a decent connection (I run packet on my HT). I ownly do my BBSen on the wa6ham bbs in pittsburg cal. I like to set a goal on how far

I can go on the net in a single night. so far colorado springs is the farthest west I've gotten, I'm trying to get back to St. Joesepg mo. I have family there.

-Micah-
KD6PJM

Date: Tue, 16 Aug 1994 15:04:52 AST
From: dog.ee.lbl.gov!agate!darkstar.UCSC.EDU!news.hal.COM!olivea!
charnel.ecst.csuchico.edu!yeshua.marcam.com!zip.eecs.umich.edu!
newsxfer.itd.umich.edu!gatech!howland.reston.ans.@ihnp4.ucsd.edu
Subject: Baypac and HTX-202
To: ham-digital@ucsd.edu

Please tell me the configuration of the baypac modem and the Radio Shack 2 meter.

Thanks Paul VE9VW.

Date: 18 Aug 1994 07:08:16 GMT
From: ihnp4.ucsd.edu!munnari.oz.au!sgiblab!rpal.rockwell.com!
headwall.Stanford.EDU!leland.Stanford.EDU!gekko@network.ucsd.edu
Subject: Internet Connections Via Packet
To: ham-digital@ucsd.edu

Currently I'm involved in a project requiring constant access to internet anywhere in the United States. I know almost nothing about packet radio, but someone said such access may be possible with packet radio. Is this possible? If so, how much slower and unreliable is it?

I couldn't find an FAQ... so if this is a very common question, sorry!

John
gekko@leland.stanford.edu

Date: Tue, 16 Aug 94 22:35:10 GMT
From: ihnp4.ucsd.edu!newshub.sdsu.edu!nic-nac.CSU.net!charnel.ecst.csuchico.edu!
yeshua.marcam.com!zip.eecs.umich.edu!panix!198!mgalatz@network.ucsd.edu
Subject: Is there a FAQ
To: ham-digital@ucsd.edu

Hi everyone,

Is there a FAQ about radios and digital com?

Date: 18 Aug 1994 01:28:10 GMT
From: dog.ee.lbl.gov!agate!darkstar.UCSC.EDU!news.hal.COM!olivea!
charnel.ecst.csuchico.edu!yeshua.marcam.com!zip.eecs.umich.edu!
newsxfer.itd.umich.edu!gatech!howland.reston.ans.@ihnp4.ucsd.edu
Subject: JVFAKX Interfaces?
To: ham-digital@ucsd.edu

Mike Cowgill (zeus@myth.demon.co.uk) wrote:

: I am currently running JVFAKX 5.1 (anyone know a FTP site for a more recent
: version?) with the simple comparator interface. Before I launch head on into
: building the full AM/FM serial port version, are there any plans to use the
: Sound Blaster ADC?, or are there any alternative circuits, since the ADC chip
: is proving difficult to source. Cheers.

: Mike.

: --

: Michael S. Cowgill (Mike) _ My opinions! MINEMINEALLMINEHAHAHA!
: zeus@myth.demon.co.uk (That's me) _ " Swirly thing alert!"
: G1VOX@GB7WRG.GBR.EU 44.131.2.76 _ "...Cracking toast Gromit!..."

A new version (6.0) of JVFAKX can be found in the FTP sites listed below.

Host plaza.aarnet.edu.au (139.130.4.6)
Last updated 14:13 27 Feb 1994

Location: /micros/pc/oak/hamradio
FILE r--r--r-- 506282 Nov 9 02:38 jvfax60.zip

Host pc.usl.edu (130.70.40.3)
Last updated 07:19 21 Feb 1994

Location: /pub/ham
FILE rw-r--r-- 506282 Nov 24 22:04 jvfax60.zip

Host nctuccca.edu.tw (192.83.166.10)
Last updated 04:12 2 Mar 1994

Location: /PC/fidonet/ham/hamcomm
FILE r--r--r-- 533929 Feb 25 1994 jvfax601.zip

Date: 17 Aug 1994 18:06:39 GMT
From: ihnp4.ucsd.edu!ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!
math.ohio-state.edu!usc!elroy.jpl.nasa.gov!lll-winken.llnl.gov!earl.llnl.gov!
user@network.ucsd.edu
Subject: Kantronics KPC-3 or MFJ 1270C?
To: ham-digital@ucsd.edu

Greetings,
I am looking into getting into packet and was looking for input as to a
preference between the Kantronics KPC-3 and the MFJ 1270C (or another TNC I
should consider)?
My use will be VHF packet using a Mac and an IC-2AT.

Thanks in advance,
Gary KE6KXL (Kilowatt X-ray Laser)

The ramblings expressed above do not reflect the opinions of LLNL.

Gary Ross
Lawrence Livermore National Laboratory

Ross@NOVAX.LLNL.GOV
Rossman@eworld.com

NOVA Laser Operations
P.O. Box 808, L-489
Livermore, CA 94551

Rossman@aol.com

Date: Thu, 18 Aug 94 13:33:11 PDT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!

europia.eng.gtefsd.com!uhog.mit.edu!news.kei.com!ssd.intel.com!chnews!
news@network.ucsd.edu
Subject: Need 9600 baud mod info for IC271/471
To: ham-digital@ucsd.edu

I'm looking for 9600 baud modification info for the ICOM 271 & 471.

Thanks & 73s,
Tom WB7ASR...

Date: Thu, 18 Aug 94 13:10:16 PDT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
europia.eng.gtefsd.com!uhog.mit.edu!news.kei.com!ssd.intel.com!chnews!
news@network.ucsd.edu
Subject: New satellite Windows programs
To: ham-digital@ucsd.edu

I just received my copy of the July/August 1994 issue of THE AMSAT JOURNAL. In the journal, pages 6-9, they talk about a new Windows PB and PG like program by ZL2TP0. The program also has a fully intergrated color graphic world map showing satallite positions and foot prints. It has full support for the Kansas City Tracker/Tuner, with the optional Windows program by KC6WYG, on page 10.

Both programs can be purchased from AMSAT direct for \$40.00 @ 301-589-6062
All proceeds go to the Phase3D program.

73s, Tom WB7ASR...

Date: 18 Aug 94 13:10:22 GMT
From: news-mail-gateway@ucsd.edu
Subject: Upgrading TNC
To: ham-digital@ucsd.edu

>I currently use a Baycom BP-1 on a 8088 PC. Being that I am only doing packet, what advantages would I have upgrading to a more expensive TNC basically, a separate hardware TNC is better at being a TNC than the software TNCs in several respects. it comes down to being able to use the computer for something else and still have the TNC function available...in some cases you get added functionality since the TNC could have a mini-mailbox in it and the TNC could be left on to be a digipeater for other stations and such.

the software TNC is attractive in that changes to things can be easily (??)

done since "it's only software." (famous last words...)

several of the guys here built up the "PMP" style packet boxes and in the end we really want a real TNC we can hang on a terminal server so we can run packet from the desk at break time...8)

hopefully we'll make enough bucks this year at the hamfest to swing something like an MFJ-1248 or whatever the model number is...maybe even a radio to go with it...

73, bill wb9ivr
collins amateur radio club/melbourne, fl

Date: Mon, 15 Aug 1994 01:25:06 GMT

From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
europa.eng.gtefsd.com!MathWorks.Com!news.kei.com!hookup!reptiles.org!geac!torsqnt!
problem!vigard!mdf@network.ucsd.edu
Subject: Widrow-Hoff LMS algorithm for DSP???

To: ham-digital@ucsd.edu

ahall@ux4.cso.uiuc.edu (Allen Hall) writes:

>Appearantly the LMS algorithm is nice to use to cut out signals that
>are repetitive when listening to SSB (you wouldn't use it for CW-cause
>all you would hear instead of the morse code was a "click" everytime
>a new tone came buy :)

it also works the other way around: you can use it to pick out the
repetitive (correlated) signals, and remove the random (uncorrelated) ones.

the algorithm is frighteningly simple, and most textbooks on signal
processing will contain a discussion of it. further information should
be found in such a place, and not the network. try a library.

but for those impatient folk with Linux machines and sound card, what follows
is a very small and very simple piece of demo code that runs an LMS on
`/dev/dsp` output. it is disgustingly inefficient (too many ops/sample,
use of double's etc), so only runs at about 1/4 real-time rate (8000
samples/second) if you have a 33MHz 486 and have cached the sample file.

usage is simple: grab a sample from `/dev/dsp` into some file: "cat
`/dev/dsp >blee`". then "`./lms <blee >/dev/dsp`", or write the output to
another file and blat that into `/dev/dsp` to listen to it without the
gaps. "`lms -c`" removes correlated signals [which is what heterodyne
supression filtering does] and "`lms -n`" removes uncorrelated signals.

as simple as this is, it does a *remarkably* effective job.

```

---- begin lms.c ----
#include <stdio.h>
#include <math.h>
#include <stdlib.h>

double    xb[4096];
double    w[1024];
#define    XMASK     0x3ff

int mode;
#define NO_UNCOR 0
#define NO_COR   1

extern int optind;
extern char *optarg;

int
main(int argc, char **argv)
{
    double x, b, p, v, g, e, levl;
    int M, n, c, i, delay;

    mode = NO_UNCOR;
    b    = 0.99;
    M    = 32;
    delay = 32;
    n    = 2028;
    levl = 1.0;
    while((c = getopt(argc, argv, "a:M:D:b:nc")) != EOF) {
        switch(c) {
        case 'n': mode = NO_UNCOR;      break;
        case 'c': mode = NO_COR;       break;
        case 'M': M = atoi(optarg);    break;
        case 'D': delay = atoi(optarg); break;
        case 'b': b = atof(optarg);    break;
        case 'a': levl = atof(optarg); break;
        }
    }

    for(i=0; i<M; ++i)
        w[i] = 1.0;
    p = 0.00;
    while((c = getchar()) != EOF) {
        xb[n&XMASK] = x = ((double) c) - 128.0;
        p = b*p + (1.0 - b)*x*x;
        if(p == 0.0)
            v = 1.0;
        else

```

```

        v = (1.0 - b)/p;
g = 0;
for(i=0; i<M; ++i)
    g += w[i]*xb[(n-delay-i)&XMASK];
v *= x - g;
for(i=0; i<M; ++i)
    w[i] += v*xb[(n-delay-i)&XMASK];
++n;

/*
 * new signal output
 */
if(mode == NO_COR)
    g = x - g;
g *= lev1;
putchar(128 + (int) g);
}

}
----- end lms.c -----
-- Matthew Francey           mdf@vigard.mef.org          ve3rqx@io.org
"live before you die"       GPS(NAD27): N43o34.210' W079o34.563' +0093m
-----
```

Date: 18 Aug 1994 02:28:13 GMT
 From: ihnp4.ucsd.edu!dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
 vixen.cso.uiuc.edu!prairienet.org!k9cw@network.ucsd.edu
 Subject: X1J Gurus?
 To: ham-digital@ucsd.edu

In a previous article, mfoster.amoco.com (Michael H. Foster) says:

```

>Has anyone optimized their x1j parms?
>With several band openings over the past few weeks, the x1j's locally
>lose their buffer space and hose up until a reset is given. We are
>trying different parm settings hoping the node will release it's buffer
>space faster, but we have no specific parameter documentation to guide us with
these settings.
>Can anyone provide any insight or specifics?
>
```

One of the best things to do is lock in the nearest neighbor routes and set the port QUALITY to 1. That way, all nodes except for the ones that you have locked in the local ROUTES table will be ignored. Even tho the band is open, you don't want all of those temporary paths reported.

The change in the PARAMs list is the second or third one; radio port

quality. Once you lock the routes, you can change the 192 to 1.

In this area, there are about 10 digi's that can be heard on 144.91 when the band opens. The locked routes keeps the network sane.

By the way, if you are running BPQ at your local BBS or DXcluster, it should also be locked to only the nearest neighbor TheNet nodes.

73, Drew

--
----------*-----*-----*
| Andrew B. White K9CW | internet: k9cw@prairienet.org |
| ABW Associates, Ltd. | phone/fax: 217-643-7327 |
----------*-----*

Date: Thu, 18 Aug 1994 20:08:51 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!newshub.nosc.mil!news@network.ucsd.edu
To: ham-digital@ucsd.edu

References <32b56i\$ot5@Tut.MsState.Edu>, <32d90d\$2gg@vixen.cso.ui,
<3306v8\$jbi@vixen.cso.uiuc.edu>
Reply-To : craigr@marlin.nosc.mil
Subject : Re: Looking for DXCluster software

In <3306v8\$jbi@vixen.cso.uiuc.edu>, k9cw@prairienet.org (Andrew B. White) writes:
>
>In a previous article, gary@ke4zv.atl.ga.us (Gary Coffman) says:
>
>>Yes, \$400 is excessive. It's excessive because cluster is such a bandwidth
>>wasting kludge. (Ok, it's a *useful* kludge, but kludge it is.) You can
>>use free broadcast server software sending the info *2* times, one uplink
>>and one broadcast (Pacsat protocol), instead of *27* to accomplish the
>>same DX spot reporting. That's much more bandwidth friendly. Fills can be

>While I agree with you that PC use of AX.25 is not the best for distributing
>spots, it is, currently, the only game in town. AK1A has something like
>400 nodes installed around the world, and they all talk to each other (altho
>the email facility comes close to being useless if the mail has to go more
>than one hop). Besides, if the network is configured as it should be,
>with local users on one frequency and the inter-node link on another, I
>am not sure that the amount of bandwidth required is an issue.

I also agree that AX.25 is not the best protocol for sending DX spots but

PacketCluster is an AX.25 application that requires the minimum equipment on the user end. A radio, TNC, and dumb terminal is the user investment. It would seem that to implement a more efficient protocol would certainly require a computer on the user end to sort things out. Some of the OF's barely mastered getting a dumb terminal to talk to a TNC, it would be real interesting watching them trying to become computer literate. Hi..

But if someone came out with a system that offered enough advantages over the current Cluster software, I think it might catch on. There are many problems with PC that could be overcome by a more robust protocol which would be very attractive to the sysops. My own feeling is that PacketCluster needs competition or many of the problems with it are not going to be solved.

Rick Craig, N6ND
craig@marlin.nosc.mil

Date: 18 Aug 1994 17:49:28 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
vixen.cso.uiuc.edu!prairienet.org!k9cw@network.ucsd.edu
To: ham-digital@ucsd.edu

References <119955@cup.portal.com>, <32b56i\$ot5@Tut.MsState.Edu>, <32d90d\$2gg@vixen.cso.ui>
Reply-To : k9cw@prairienet.org (Andrew B. White)
Subject : Re: Looking for DXCluster software

In a previous article, gary@ke4zv.atl.ga.us (Gary Coffman) says:

>Yes, \$400 is excessive. It's excessive because cluster is such a bandwidth >wasting kludge. (Ok, it's a *useful* kludge, but kludge it is.) You can >use free broadcast server software sending the info *2* times, one uplink >and one broadcast (Pacsat protocol), instead of *27* to accomplish the >same DX spot reporting. That's much more bandwidth friendly. Fills can be >requested by user stations if a packet is missed, but that should take up >lots less bandwidth than repeating the same data over and over and over to >each and every connected station as cluster does.

>

While I agree with you that PC use of AX.25 is not the best for distributing spots, it is, currently, the only game in town. AK1A has something like 400 nodes installed around the world, and they all talk to each other (altho the email facility comes close to being useless if the mail has to go more than one hop). Besides, if the network is configured as it should be, with local users on one frequency and the inter-node link on another, I am not sure that the amount of bandwidth required is an issue.

CW uses quite a bit less bandwidth than SSB, but I don't think you would advocate abandoning phone...

73, Drew

--
----------*-----*
| Andrew B. White K9CW | internet: k9cw@prairienet.org |
| ABW Associates, Ltd. | phone/fax: 217-643-7327 |
----------*

Date: Thu, 18 Aug 1994 14:47:06 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!swrinde!emory!wa4mei!ke4zv!
gary@network.ucsd.edu
To: ham-digital@ucsd.edu

References <32b56i\$ot5@Tut.MsState.Edu>, <32d90d\$2gg@vixen.cso.uiuc.edu>, <32ugib\$m02@vixen.cso.uiuc.edu>≥±

Reply-To : gary@ke4zv.atl.ga.us (Gary Coffman)

Subject : Re: Looking for DXCluster software

In article <32ugib\$m02@vixen.cso.uiuc.edu> k9cw@prairienet.org (Andrew B. White) writes:

>
>Is \$400 really excessive? If you own a modern transceiver, you paid much
>more than that for it (new). Add an antenna, amp, keyer, computer, etc,
>there is quite a bit tied up in this hobby. If there is interest in DX
>operation in your area, you should be able to find local support for the
>cluster. Here in Central IL, we have fewer than two dozen hams who play the
>DX game, but all are willing to support the Cluster. I suggest that you
>ask around - you might be surprised to find that there are, indeed, people
>willing to pay money for access to timely DX spots!

Yes, \$400 is excessive. It's excessive because cluster is such a bandwidth wasting kludge. (Ok, it's a *useful* kludge, but kludge it is.) You can use free broadcast server software sending the info *2* times, one uplink and one broadcast (Pacsat protocol), instead of *27* to accomplish the same DX spot reporting. That's much more bandwidth friendly. Fills can be requested by user stations if a packet is missed, but that should take up lots less bandwidth than repeating the same data over and over and over to each and every connected station as cluster does.

I know, think of it as *test* data for the network engineers. :-(

Gary

--
Gary Coffman KE4ZV | You make it,
Destructive Testing Systems | we break it.
534 Shannon Way | Guaranteed!
Lawrenceville, GA 30244 |
| gatech!wa4mei!ke4zv!gary
| uunet!rsiatl!ke4zv!gary
| emory!kd4nc!ke4zv!gary
| gary@ke4zv.atl.ga.us

End of Ham-Digital Digest V94 #277
